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ABSTRACT

The establishment of new manufacturing plants in 5 towns in Kentucky had a negative net fiscal impact on most local governmental units during 1958-63. In most of the counties studied, the direct effect of locating new manufacturing plants in the small towns was to increase the costs of government for the school district, and often the town, without increasing the revenue. The increases were typically small, however. Also, a comparison of the study counties with a group of comparable counties which had no new industry added during the study period showed no significant differences between the two groups of counties in terms of changes in local governmental revenue or expenditures due to any secondary effects of new industry in the study counties. (Author)

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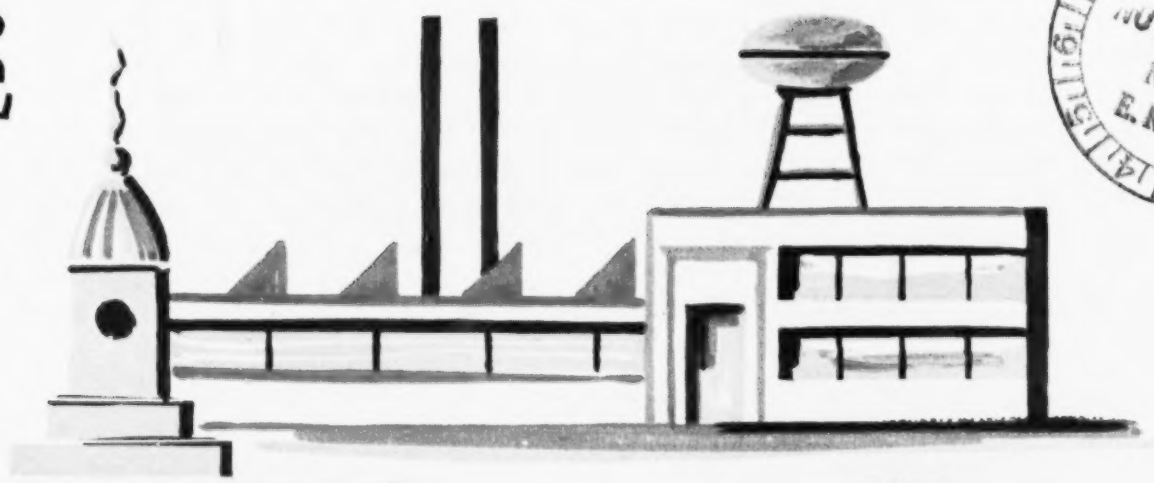

THE IMPACT OF NEW INDUSTRY ON LOCAL GOVERNMENT FINANCES IN FIVE SMALL TOWNS IN KENTUCKY

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ABSTRACT

The establishment of new manufacturing plants in five towns in Kentucky had a negative net fiscal impact on most local governmental units during 1958-63. In most of the counties studied, the direct effect of locating the new manufacturing plants in the small towns was to increase the costs of government for the School district and often the town without increasing the revenue. The increases were typically small, however. Also, a comparison of the study counties with a group of comparable counties that had no new industry added during the study period showed no significant differences between the two groups of counties in changes in local governmental revenue or expenditures due to any secondary effects of new industry in the study counties.

KEY WORDS: Industrial development, local government, public finance, taxation, Kentucky.

PREFACE

When new industry comes to a rural community, the effects will be more acceptable if they have been anticipated and planned for. One consequence, which is often ignored, involves the new firm's effects on local government. The study reported on here was designed to provide information on the effects of new industry on local government finances.

The establishment of a manufacturing plant in a rural town is often thought to bring about an accompanying increase in tax revenue for the community. What many persons overlook, however, is that a new plant may also bring about increased demands for services that may increase the cost to local government by an amount equal to or greater than the increase in tax revenue. As a result, local citizens may find it necessary to pay somewhat higher taxes if they want to maintain the quality of their local government services.

The question of whether new plants are of overall benefit to the community is not discussed in this report. Industrial plants have many effects on the local economy, beyond their effects on local government. And even if the new plants cause increases in local government costs that exceed new tax revenues provided, other positive factors may outweigh this increase in net costs to local government.

The study was conducted by the Bureau of Business Research of the University of Kentucky, under contract with USDA's Economic Research Service (ERS). John L. Fulmer, Director of the Bureau, had a major role in the planning and execution of the study. Thomas F. Hady, Community Facilities Branch, Economic Development Division, ERS, participated in planning the project and preparing the final report on it. The assistance of Don M. Soule and Alan Winger, both of the University of Kentucky, is also gratefully acknowledged.

Thomas F. Stinson, Community Facilities Branch, Economic Development Division, ERS, gave valuable assistance in the planning and writing of the

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HIGHLIGHTS

The establishment of new manufacturing plants in five rural towns in Kentucky during the period 1958-63 had a negative net fiscal impact on most of the affected local governmental units. However, the impacts typically were small.

Net fiscal impact is defined as the difference between the new plant's contribution to local government revenue and the costs to local government attributable to the new plant. It may be positive or negative. A negative fiscal impact occurred most often when the new firm either was granted property tax concessions or its physical plant was city-owned and not subject to local taxes. In addition, in those instances in which the new firm brought even a moderate number of new residents (and school children) to the community, the impact on the local school district was likely to be negative. A third factor, relevant only to the municipal government, was the provision of nontax financial inducements to the new firm. A combination of tax concessions and significant nontax inducements tended to produce a substantial negative impact for the city government. In such a case, the inducements presumably represented deliberate planning by the city; the resulting negative impact on local government was considered a small price to pay for the anticipated positive impact on the private economy.

As suggested by the above, the fiscal impact was by no means uniform among the several units of local government studied. The units most susceptible to a negative effect were the school districts. These were closely followed by the city governments. County governments were least affected by the new industry. They offered no new services but did realize a modest gain in revenue.

Considering all units of local government as an aggregate, the typical new plant in the towns studied here added few new residents to the community; the availability of local labor was in fact a major reason for the locations. For this reason there was very little increased demand for local government services, and this factor served to keep the magnitude of negative impacts relatively small.

A positive net fiscal impact was obtained only when nearly all employees were local residents before the plant was built and property taxes were paid on the physical plants of the new firms.

A comparison of the study counties with a group of comparable counties that had no new industry during the study period showed no significant differences between the two groups of counties in changes in local governmental revenue or expenditures. Apparently, the secondary effects of the new plants did not have a measurable impact on local governmental activities.

THE IMPACT OF NEW INDUSTRY ON LOCAL GOVERNMENT FINANCES IN FIVE SMALL TOWNS IN KENTUCKY

by

Charles B. Garrison 1/

INTRODUCTION

New industry in rural areas is gaining increased acceptance as a solution for many of the Nation's social and economic ills. Persons concerned with reducing the incidence of poverty in the Nation see the dispersion of manufacturing plants and their accompanying jobs to rural areas as a large step forward in an attack on poverty. Those concerned with the problems of our major cities see rural development as a way of reducing some of the population pressures in metropolitan areas. Still others, feeling that the small town atmosphere is vital to the American way of life, see rural industrial development as a means of making smaller communities economically viable again.

In addition, new industry is thought by many to be a solution for the problems of rural local governments. New industry, it is thought, will produce new tax revenue. That new industry may also produce new costs for local government may be overlooked, however. Little research has been done to indicate the conditions under which these additional costs may exceed additional revenues. This report represents a start in that direction.

The case study approach was used to analyze five study towns in Kentucky to determine both the amount of local revenue derived from the new plant, and the direct cost of the plant to local government units--the city, the county, and the affected school districts. In this study, such direct costs included the additional costs of providing governmental services to the families of employees transferred to the area as well as costs more directly associated with the plant. To determine if the new plant had a secondary impact on local government revenues and expenditures, trends in these amounts for the study group and a control group were compared. Aside from their not

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1/ Assistant Professor of Economics, The University of Tennessee. At the time this study was conducted, Dr. Garrison was Research Associate, Bureau of Business Research, University of Kentucky.

experiencing any new industrial activity during the study period, the counties in the control group had social and economic conditions similar to those of the study counties. 2/

All the case studies followed the same basic pattern. Total direct costs to the local government (and in turn to the tax-paying citizens) were computed. Included were such costs as those for extension of water lines, extra police protection, fire protection, and, of major importance, educating the additional children brought into the county by employees of the new firm. After the costs associated with the plant were computed, tax revenues derived from the plant were computed and compared with governmental costs. The difference between the costs and revenues is called the "net fiscal impact" of the new plant. This impact may be either positive or negative. These computations were made for the three individual units of government in the county as well as for all units combined.

SELECTION OF STUDY TOWNS

Since this project was designed to measure the financial impact of new industry on governments of small towns, the major criteria used in selecting the study communities were that they be located outside Standard Metropolitan Statistical Areas, that they be small (in this case a 1960 population between 1,000 and 5,000), and that at lease one new manufacturing plant employing at least 100 people had been established in the community during 1958-63.

Other selection criteria were then used to ensure that no major economic developments other than the new manufacturing activity had occurred during the study period and that adequate data on the effects of the new plants were available. Towns tied to the economies of neighboring larger cities were eliminated from consideration. On the basis of the foregoing criteria, five towns in rural Kentucky--Flemingsburg, London, Stanford, Lebanon, and Russell Springs--were selected for study.

These towns ranged in population from 1,125 to 4,813 (table 1), and had from one to four new manufacturing firms locate in their city sometime during the study period (table 2). Products produced by these plants varied from electronic equipment to yarn, although four of the nine plants manufactured clothing of some type.

2/ "Study town" and "study county" are used somewhat interchangeably in this report. Each town was in a different county. Thus, study of five towns implies study also of the five counties in which the towns were located, inasmuch as county governments and school districts could also have been affected by the new plants.

Table 1.--Population and location of five study towns in Kentucky, 1960

Study towns	Population 1/	County	Distance to nearest larger city with--	
			Under 50,000 persons	50,000 persons or over
			- Miles -	- Miles -
Flemingsburg	2,067	Fleming	18	60
London	4,035	Laurel	14	87
Stanford	2,019	Lincoln	11	45
Lebanon	4,813	Marion	28	62
Russell Springs	1,125	Russell	32	91

1/ U.S. Census of Population, 1960.

Table 2.--Type and size of manufacturing firms locating in five study towns in Kentucky, 1958-63

Study towns	Manufacturing firm		
	Type	Employees	Established
		- - Number - -	- - Year - -
Flemingsburg	Auto trim	115	1959
	Shoe	90	1962
London	Yarn spinning	100	1962
Stanford	Clothing	200	1959
Lebanon	Whiskey barrels	140	1961
	Electronic	100	1959
	Clothing 1/	75	1960
	Clothing 1/	60	1958
Russell Springs	Clothing	125	1959

1/ Combined into 1 plant in 1963 and relocated outside city limits.

Manufacturing Developments in Kentucky, Kentucky Department of Commerce annual series.

CASE STUDIES

Flemingsburg, Fleming County

Flemingsburg (population 2,067) is located in the Outer Blue Grass Region, 60 miles from Cincinnati and 80 miles from Lexington. In 1958-63, the economy of Flemingsburg, and of Fleming County, was fairly typical of that of the State's rural areas. Agriculture was the county's major source of income, accounting for nearly half of all income and more than two-thirds of all income from basic activities in 1958 (table 3). 3/ Despite a relatively prosperous agricultural sector, however, personal income in the county was well below the State average because of a lack of basic economic activity other than agriculture. In 1950, only 34 manufacturing jobs and three mining jobs existed in the county. Jobs in other counties were the second largest source of basic employment. Commuters to other counties accounted for 86 jobs in basic activities; 35 of these jobs were in the neighboring town of Maysville.

As might be expected, the economy of Fleming County was characterized by low wage rates and underemployment. The 1960 unemployment rate of 5.2 percent was lower than that in any other study county and well below the State figure of 6.6 percent. The beginning of the study period (1958) coincided with the loss of a clothing plant that had opened in 1954. This plant, which the townspeople had provided by remodeling an abandoned feed mill, employed an average of about 125 women until it began contracting in 1957, and finally closed.

In 1959, a subsidiary of a large, diversified corporation was established in Flemingsburg. This company manufactured automotive and appliance trim at a plant located on 17 acres of land at the edge of town. The original investment, about $1.5 million, included the cost of construction of a 20,000-square-foot building. This building was later expanded twice, to 35,000 square feet in 1962 and 65,000 square feet in 1964. Employment at the plant averaged about 125 persons during the study period, although during 1963 total employment jumped to 180. About 70 percent of the work force were men in that year.

With the exception of 15 supervisory personnel brought to Flemingsburg by the company, the original labor force came entirely from the county. Workers from rural areas predominated throughout the study period. At the time these people were hired, most were underemployed small farmers, rather than unemployed. In general, those hired did not move to town, but continued farming, thus establishing two sources of income.

A second major manufacturing plant came to Flemingsburg in 1962. This plant, a branch of a large shoe manufacturing firm, provided employment for

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3/ The distinction between "basic activities" and "nonbasic activities" derives from the concept of an economic base. Basic activities of a community are those which export goods and services to other areas, including activities which serve tourists and activities to which residents of the area commute. Nonbasic activities, on the other hand, are those which are dependent on the respending locally of the basic income.

Table 3.--Distribution of personal income by source of income, Fleming County, Kentucky, 1958

Source of income	Amount	Percentage of total
	1,000 - dollars -	- Percent -
Basic activities:		
Commuting to jobs outside county, all industries	230	2.3
Agriculture	4,767	48.5
Mining	20	0.2
Manufacturing	70	0.7
Nonfarm proprietors' income	54	0.5
Property income	250	2.5
Transfer payments	1,229	12.5
Total	6,620	67.2
Nonbasic activities:		
Contract construction	184	1.9
Transportation, communication, and utilities	279	2.8
Wholesale and retail trade	716	7.3
Finance, insurance, and real estate	94	1.0
Service	184	1.9
Nonfarm proprietors' income	809	8.1
Property income	613	6.2
Local governments	353	3.6
Total	3,232	32.8
Grand total	9,852	100.0

Quindry, Kenneth E.,and Porter, Robert L., Personal Income in Kentucky Counties, 1958-60, Bureau of Business Research, University of Kentucky, 1962.

150 persons in 1963. About 80 percent of the employees were women, many of whom formerly worked at the clothing manufacturer's plant that failed in the late fifties. Of the original 90 workers hired, 30 were transferred from other plants operated by the company in nearby cities. About half of these transferred employees shifted their place of residence, and half commuted. Nearly all of the local workers hired were from rural areas of the county, and as in the case of the employees of the auto trim plant, most continued to maintain their farms as well as work in town.

Revenue Effect

Company officials of the auto trim plant began operation with the objective of becoming "part of the community." Accordingly, no local government assistance was requested for financing acquisition of land, construction of the building, or purchase of equipment, nor were any tax exemptions requested. The only city government action involved extending a water line a short distance to the plant, and the cost to the city was relatively small.

In contrast, the city issued $250,000 worth of industrial revenue bonds to finance land acquisition and building construction for the shoe manufacturer. As a result, the city owned the land and buildings of the plant, making them exempt from real property taxes. In addition, the city granted the company a 5-year exemption from personal property taxes. In return, the company made monthly rental payments of $1,567.50 to the city, an amount equivalent to the monthly amount due on the revenue bonds.

Details of the real and personal property taxes paid by the two new firms to the three local government units apear in table 4. Local government taxes paid by the auto trim plant during the study period were considerable--an average of $2,592 a year. 4/ As noted, the shoe company paid no real property taxes. Personal property taxes were paid to the county and school district only. As shown in table 4, these amounts were quite small, with only $46 paid annually. In 1968, when the 5-year tax exemption expired, the shoe company began to pay city personal property taxes. Based on 1958-63 taxing practices, the amount due the city was $16 yearly after the exemption expired. The annual revenue gain produced by the auto trim corporation was $2,505 (table 5). This amount was later reduced to $1,655 after correction of an assessment error.

Even the shoe company, despite the many exemptions it received, produced a small gain in revenue.

4/ Because of an apparent assessment error, the city collected taxes on manufacturing equipment and stocks of raw materials. These items are exempt from local taxation in Kentucky. The error was corrected, however, and the firm began paying about $75 per year in personal property taxes. Total city taxes in 1967 were approximately $500.

Table 4.--Annual property taxes paid to local government units by an auto trim plant and a shoe manufacturing plant, Flemingsburg, Kentucky

Firm and local government unit	Property taxes		
	Real	Personal	Total
	------- Dollars -------		
Auto trim, average 1960-63:			
County	367.88	11.57	379.45
School district	837.64	26.44	864.08
City	433.61	915.04	1,348.65
Total	1,639.13	953.05	2,592.18
Shoe manufacturer, 1963:			
County	0	14.63	14.63
School district	0	31.35	31.35
City	0	0	0
Total	0	45.98	45.98

Expenditure and Services Effect

The amount and costs of new public services required by a firm depend in large measure on the number of new residents brought to the community. New residents mean new school children, and if the previous level of local support is to be maintained, additional revenue is required. It is also the new residents who force expansion in fire protection and other basic services, if they are needed.

In the case of Flemingsburg, each of the new companies brought in 15 managerial and supervisory employees. Company officials estimated that each company accounted for an increase of 25 pupils in the local school system. To estimate the cost of the new students, it was assumed that the cost to the school district of educating an additional student without reducing the

quality of education received by other students is equal to the average local revenue per student. 5/

Table 5.--Annual net fiscal impact on local government units caused by addition of an auto trim plant and a shoe manufacturing plant, Flemingsburg, Kentucky

Item	County	School district	City	Total
		Dollars		
Auto trim, average 1960-63:				
Additional revenue 1/	367.93	836.66	2/1,300.05	2,504.64
Cost of additional services	0	2,400.00	3/275.00	2,675.00
Net fiscal impact	367.93	-1,563.34	1,025.05	-170.00
Shoe manufacturer, 1963:				
Additional revenue	9.17	19.65	0	28.32
Cost of additional services	0	2,400.00	4/1,000.00	3,400.00
Net fiscal impact	9.17	-2,380.35	-1,000.00	-3,371.68

1/ Average annual revenue after plant was built less annual revenue before plant was built. 2/ After a 1966 reassessment, net revenue for the city fell to $450 and net fiscal impact on the city to $175. 3/ Prorated share of the cost of extending water line. 4/ Prorated share of the cost of constructing a water tower and extending the water line.

The costs of additional government services required by the new firms are shown in table 5. As was expected, school districts had the largest additional cost with a total of $4,800 attributed to the new firms. The rest of the costs were relatively minor. For the auto trim plant, the extension of a water line was necessary. This project, which cost $5,000, was part of a 40-year bond program. The annual cost to the city was $275. The shoe firm was provided a water tower for fire protection purposes. Total cost of this project was $18,000 and the annual cost was $1,000.

5/ Given the present state of knowledge about the costs of producing a given quality of education, this is a reasonable assumption. However, two cautions are in order. First, situations in individual school districts will vary. One district might be able to absorb 50 students at little additional cost; another might have to hire new teachers and expand its buildings. Second, research since this study was completed suggests that educational quality may be more closely correlated with expenditures per teacher than with expenditures per pupil. (See Thomas F. Stinson and Edward F. Krahmer, "Local School Expenditures and Educational Quality: A Correlation Analysis," American Journal of Agricultural Economics, December 1969.)

No other local government costs were attributed to the new plants. Local officials interviewed during the study believed that services and facilities were adequate to take care of any needs that might arise.

Net Fiscal Impact

The net fiscal impact of the two new plants is shown in table 5. The table provides rather striking evidence of the negative impact that can occur even if only a comparatively small number of new children are added to a school system.

The effect is, of course, intensified when the firm is exempt from a local real estate tax. It should be noted, however, that even in the instance of the auto trim plant, which was paying all taxes, added local governmental costs were greater than the new tax revenues.

London, Laurel County

The economy of London (population 4,035), and of Laurel County, was among the poorest in the State at the beginning of the study period. The county's 1958 per capita income of $858 (59 percent of the State average and 41 percent of the national figure) ranked 75th among such incomes for the 120 counties of Kentucky.

Farms in Laurel County were very small, with the 1959 average value of farm products sold only $1,575 per farm. Although agriculture was less important in this county than elsewhere in the State, it was a major source of employment at the time of the study and accounted for about one-sixth of total personal income in the county in 1958 (table 6). Manufacturing was important by both employment and income measures. However, a large source of personal income was transfer payments. London's status as a minor trade and tourist center also accounted for considerable income.

A spinning company, manufacturing worsted and synthetic yarns, was established in London in 1962. Because the economy of Laurel County was fairly diversified at the time, the new plant did not cause as radical a change in the economy as new plants did in some of the other countries. In addition, since the plant was only in existence for 1 year during the study period, many of its ultimate effects on the economy may not have been observed. Including this firm in the study is useful, however, for showing the effects a new plant has on local government finances during its first year.

Although employment promised to be (and was) greater in later years, during 1962 the plant employed only 107 people. Sixty percent of these employees were women. With the exception of five supervisory personnel brought to London by the company, practically all the workers were residents of Laurel County prior to their employment with the new firm. Again, workers were typically small farmers, or wives of farmers.

The establishment of the spinning company in London provides another example of the cost of the local financial inducements used to attract industry.

In 1957, the city acquired property suitable for an industrial park near town. The purchase was made from part of a combined airport construction-industrial park bond issue supported by a small tax levy. Sixteen acres of this land were donated to the spinning company in 1952. In addition, the city issued

Table 6.--Distribution of personal income by source of income, Laurel County, Kentucky, 1958

Source of income	Amount	Percentage of total
	1,000 dollars	Percent
Basic activities:		
Commuting to jobs outside county, all industries	96	0.5
Agriculture	2,881	16.1
Contract construction	63	0.4
Mining	283	1.6
Manufacturing	1,300	7.3
Nonfarm proprietors' income	448	2.5
Wholesale and retail trade	311	1.7
Property income	318	1.8
Railroad	585	3.3
Services	418	2.3
Transfer payments	2,947	16.5
Total	9,650	54.0
Nonbasic activities:		
Contract construction	761	4.3
Transportation, communication, and utilities	1,040	5.8
Wholesale and retail trade	1,781	10.0
Finance, insurance, and real estate	216	1.2
Services	810	4.5
Nonfarm proprietors' income	1,832	10.2
Property income	779	4.4
Local governments	1,005	5.6
Total	8,224	46.0
Grand total	17,874	100.0

Quindry, Kenneth E., and Porter, Robert L., Personnel Income in Kentucky Counties, 1958-60, Bureau of Business Research, University of Kentucky, 1962.

industrial revenue bonds in the amount of $150,000 to finance construction of the plant. Additionally, part of the company's equipment was purchased from the proceeds. The city also constructed a sewage disposal plant and an elevated water tank on the site. In return, the company was making monthly rental payments to the city in an amount sufficient to cover all principal and interest payments on the industrial revenue bonds.

Table 7.--Annual property taxes paid to local government units by a yarn spinning plant, London, Kentucky, 1963

Local government unit	Property taxes		
	Real	Personal	Total
	Dollars		
County	0	20.51	20.51
School district	0	37.93	37.93
City	0	1/	1/
Total	0	58.44	58.44

1/ Plant located outside city limits.

Revenue Effect

As shown in table 7, tax revenues produced for local government were minimal during the study period. Since the city owned the land and buildings, no real property taxes were collected, and since the plant was located outside the city limits, personal property taxes were not paid to the city either. Further, the real estate taxes paid on the property prior to its acquisition by the city were greater than the personal property taxes paid to the county by the new plant (table 8). Thus, the plant brought about a decrease in the county's tax receipts, at least through the last year under study (1963).

Expenditure and Services Effect

New residents working at the spinning plant placed relatively little demand on the London school system. Five families, with a total of only four school children, moved to the community. Since the London school district had, at the time, an enrollment of about 1,000 students, it could be argued that the cost of adding four students was negligible. In keeping with the practice

of attempting to estimate all costs, however, the cost to the school district was computed. It amounted to $511.40 annually.

Table 8.--Annual net fiscal impact on local government units caused by addition of a yarn spinning plant, London, Kentucky, 1963

Item	County	County school district	City school district	City	Total
			Dollars		
Additional revenue 1/	-5.60	-18.02	0	2/	-23.62
Cost of additional service	0	---	511.40	2/	511.40
Net fiscal impact	-5.60	-18.02	-511.40	2/	-535.02

1/ Prior revenue greater than current revenue.
2/ Plant located outside city limits. For 1962, the city shows a net fiscal impact of -$92,000 due to water and sewer changes (see text below).

Other costs to local government consisted primarily of the cost of purchase of the plant site and construction of water and sewer facilities on the site by the city. These expenditures, which totaled $92,000 were derived from the proceeds of a bond issue approved by the city's voters in 1957, 5 years before the arrival of the spinning firm. The bonds were retired in 1966, and the tax that supported them expired. It therefore might be appropriate to assign the entire cost to 1962.

Net Fiscal Impact

Except for costs assigned to 1962, the only significant net fiscal impact was on the city school system, and it was negative and comparatively small. However, if the water and sewer charges had been included, a large negative impact would have resulted for the city in 1962. Had these costs been amortized over the life of the improvements, a smaller annual negative impact would have resulted for the city government.

Stanford, Lincoln County

The economy of Lincoln County, and of Stanford, the major city, was dominated by agriculture and characterized by low incomes at the beginning of the study period (table 9). Total value of farm products sold and average value of farm land and buildings per acre were higher than in any of the other study counties. However, the small size of farms resulted in an average value

Table 9.--Distribution of personal income by source of income, Lincoln County, Kentucky, 1958

Source of income	Amount	Percentage of total
	1,000 - dollars -	- Percent -
Basic activities:		
Commuting to jobs outside county, all industries	2,659	18.6
Agriculture	5,109	35.6
Mining	10	0.1
Manufacturing	249	1.7
Nonfarm proprietors' income	51	0.4
Property income	298	2.1
Transfer payments	1,883	13.1
Total	10,259	71.6
Nonbasic activities:		
Contract construction	164	1.1
Transportation, communication, and utilities	353	2.5
Wholesale and retail trade	783	5.5
Finance, insurance, and real estate	123	0.9
Services	253	1.8
Nonfarm proprietors' income	977	6.8
Property income	730	5.1
Local government	680	4.7
Total	4,063	28.4
Grand total	14,322	100.0

Quindry, Kenneth E., and Porter, Robert L., Personal Income in Kentucky Counties, 1958-60, Bureau of Business Research, University of Kentucky, 1962.

of farm products sold per farm that was well below the value in both Fleming and Marion Counties. Jobs requiring commuting (chiefly to Danville, Lancaster, and Lexington) were the second largest source of income from employment in basic activities. Manufacturing accounted for only 72 jobs. Then, in 1959, a company manufacturing men's and boys' clothing was established in Stanford. The arrival of this plant produced a substantial change in the basic industry sector of Lincoln County's economy.

Employment in the new plant averaged nearly 340 persons after the first year of operations, with a slightly higher trend in 1963. All employees except the plant manager were from the local area. However, only about 60 percent were from Lincoln County; the rest commuted from neighboring counties. Ninety percent of the new jobs went to women, most of whom were wives of small farmers. The earnings of these women generally were supplemental income for their families.

The new plant in Stanford provides a view of the effect on local government of another method of financing industry. This plant was financed by the New Stanford Development Corporation, a private nonprofit organization. The corporation raised funds by selling stock to local residents and by borrowing from the local bank. The funds obtained were used to purchase the plant site and construct the buildings. The New Stanford Development Corporation as owner of the land and buildings, leased this property on a yearly basis to the clothing firm. Monthly rental averaged about $1,000, and the company had the option to buy at any time.

Since the plant was owned by a private corporation, the plant property was subject to all local taxes. However, during the study period, the property received a "favorable assessment," apparently at about 1 percent of market value (table 10).

Revenue Effect

Because of the low assessment, taxes remained low throughout the study period, averaging approximately $14 a year for the county, $49 a year for the school district, and $19 a year for the city. For all three units, revenues increased only slightly from what they would have been had the plant not been build.

Table 10.--Annual property taxes paid to local government units by a clothing manufacturer, Stanford, Kentucky, average 1960-63

Local government unit	Property taxes		
	Real	Personal	Total
	Dollars		
County	7.84	6.04	13.88
School district	28.00	20.81	48.81
City	10.29	8.74	19.03
Total	46.13	35.59	81.72

Expenditure and Services Effect

The new plant had no measurable effect on requirement for government services. Because only one family was moved to Stanford by the company, population change was minimal. The only effects found here were the cost to the city water department of extending a water line to the plant, and the cost to the school district of educating two more school children. The original cost of the water line was paid for by the New Stanford Development Corporation and at the time of the study was being recovered through a rebate of 70 percent of the plant's monthly water bill. These rebates amounted to $728 annually.

The effect of two new students in a system enrolling 677 was also minimal. The increase in school expenditures was estimated to be $224.84, or $112.42 per student.

Net Fiscal Impact

The net impact of the new plant on both the city and the school district was negative (table 11). That is, despite the small number of new residents brought into the town, costs associated with the plant were greater than new tax revenue from it. However, after the study period, the real estate assessment was increased to a point where the school district gained more than enough revenue to compensate for the two additional children. In addition, amortization of the water line was expected to result in an eventual positive net fiscal impact for the city.

Lebanon, Marion County

Lebanon, in Marion County, was the largest study town, with a 1960 population of 4,813. It was unique in the study for several reasons. Four new industrial plants were established there during the study period. Despite this flurry of industrial activity, however, manufacturing employment remained below that of the mid-1950's because of the closing of a large clothing firm in 1957.

Personal income in Marion County in 1958 was $901, 72nd among per capita income levels for the 120 Kentucky counties. The per capita figure was 67 percent of State and 43.4 percent of national per capita income. The agricultural sector of Marion County was fairly prosperous, with both average farm size and average value of farm products sold per farm above the State average. However, the economy of the county was lacking in diversification, with about one-third of all personal income being derived from agriculture (table 12).

In 1958, the first of the four new plants began operation. This firm, which manufactured ladies' sportswear, was joined in 1960 by a firm manufacturing similar products. Although they were different corporate entities and had different ownership structures, the two firms had common management and eventually were housed in the same building. For purposes of this study they were treated as one firm. Both companies were managed by the former head

Table 11.--Annual net fiscal impact on local government units caused by addition of a clothing manufacturing plant, Stanford, Kentucky, average 1960-63

Item	County	School	City	Total
		Dollars		
Additional revenue 1/	7.92	27.61	19.03	2/54.16
Cost of additional service	0	224.84	3/728.00	954.84
Net fiscal impact	7.92	-197.23	-708.97	-898.68

1/ Average annual revenue after plant was built less annual revenue before plant was built. 2/ Real property assessment increased in 1966; taxes increased to $875.03 which left a net fiscal impact of -$77.81. 3/ Represents rebate to New Stanford Development Corporation of 70 percent of plant's water bill.

tailor of the garment firm that left Lebanon in 1957. The two firms originally began operation in rented buildings in the city. In 1963, the two operations were combined in a new building located just outside the city limits. Employment for the combined firms averaged 138 persons for the period under study. During the first 2 years, however, only one of the firms was in operation and employment was well below 100. In 1963, slightly more than 90 percent of the employees were women, all hired from among local residents.

A third firm, producing electronic communications equipment, began operation in 1959 in the main building of the departed garment manufacturer. Employment averaged 144 during 1959-63 and was quite steady. In 1963, two-thirds of the workers were women, and with the exception of seven supervisors, all employees were hired from among local residents. All but 18 employees lived in Marion County, with a majority living in the rural areas.

In August 1961, a fourth firm moved to Lebanon, from Campbellsville, about 20 miles away. This firm, which produced whiskey barrels, employed 131 men in 1963. At the time of transfer, only one of these men was a resident of Marion County; by 1963, 54 were.

The role of financial inducements in the establishment of three new plants in Lebanon (counting the two garment firms as one) was a mixed one. The cooperage firm was financed by a $650,000 revenue bond issued by the city and the city held title to the land, building, and part of the equipment. In return, the firm paid rent to the city in an amount sufficient to meet principal and interest payments on the bonds. The city also extended a water line to the plant at a cost of $10,000 to the city.

For the other two firms, the only assistance given was the extension of water lines at costs of $1,200 and $8,000, respectively, for the garment firm and the electronics company.

Table 12.--Distribution of personal income by source of income, Marion County, Kentucky, 1958

Source of income	Amount	Percentage of total
	1,000 dollars	Percent
Basic activities:		
Commuting to jobs outside county, all industries	1,273	9.0
Agriculture	4,186	29.5
Mining	133	0.9
Manufacturing	647	4.6
Nonfarm proprietors' income	33	0.2
Property income	319	2.2
Transfer payments	2,124	15.0
Total	8,715	61.4
Nonbasic activities:		
Contract construction	215	1.5
Transportation, communication, and utilities	790	5.6
Wholesale and retail trade	1,242	8.7
Finance, insurance, real estate	142	1.0
Services	526	3.7
Nonfarm proprietors' income	1,067	7.5
Property income	791	5.6
Local government	705	5.0
Total	5,478	38.6
Grand total	14,193	100.0

Quindry, Kenneth E., and Porter, Robert L., Personal Income in Kentucky Counties, 1958-60, Bureau of Business Research, University of Kentucky, 1962.

Revenue Effect

Annual property taxes paid to local government units are given in table 13. As is shown in the table, all the new firms were in buildings outside city limits and thus were not subject to city taxes.

Table 13.--Annual property taxes paid to local government units by a sportswear manufacturer, an electronics plant, and a whiskey barrel manufacturer, Lebanon, Kentucky

Firm and local government unit	Property taxes		
	Real	Personal	Total
	------ Dollars ------		
Sportswear manufacturer, 1963:			
County	4,64	50.27	54.91
School district	12.00	130.00	132.00
City	1/	1/	1/
Total	16.64	180.27	186.91
Electronics plant, average 1960-63:			
County	377.00	87.75	464.75
School district	975.00	226.95	1,201.95
City	1/	1/	1/
Total	1,352.00	314.70	1,666.70
Whiskey barrel manufacturer, average 1962-63:			
County	2/0	152.54	152.54
School district	2/0	394.50	394.50
City	1/	1/	1/
Total	0	548.04	548.04

1/ The plants are located outside the city limits and are not subject to city taxes.

2/ Real property is owned by the city and not subject to taxes.

Comparison of the increase in government revenue attributed to the new firms provides some interesting illustrations (table 14). For both the garment firm and the cooperage plant (even though the latter paid no real estate taxes), there were modest revenue gains. In the case of the electronics firm, however, there was a decline in revenue. The decline occurred because the company purchased an existing building that had a fairly high assessment,

Table 14.--Annual net fiscal impact on local government units caused by addition of a sportswear manufacturer, an electronics plant, and a whiskey barrel manufacturer, Lebanon, Kentucky

Item	County	School district	City	Total
		Dollars		
Sportswear manufacturer, 1963:				
Additional revenue 1/	52.30	135.25	---	187.55
Additional cost of services	0	0	2/0	0
Net fiscal impact	52.30	135.25	0	187.55
Electronics plant, average 1960-63:				
Additional revenue 1/	-144.25	-373.05	0	-517.30
Additional cost of service	0	1,320.00	4/0	1,320.00
Net fiscal impact	-144.25	3/-1,693.05	0	-1,837.30
Whiskey barrel manufacturer, average 1962-63:				
Additional revenue 1/	147.90	382.50	0	530.00
Additional cost of services	0	1,200.00	5/0	1,200.00
Net fiscal impact	147.90	-817.50	0	-669.60

1/ Average annual revenue after plant was built less annual revenue before plant was built.

2/ Does not include a one-time cost of $1,200 to the city for the extension of water lines.

3/ If previous revenue from property is ignored, the additional revenue would be $1,666.70 and the net fiscal impact a positive $346.70.

4/ Does not include a one-time cost of $8,000 to the city for the extension of water lines.

5/ Does not include a one-time cost of $10,000 to the city for the extension of water lines.

rather than building on farmland or a vacant lot. When the firm purchased the property, however, the assessment was reduced from $100,000 to $65,000, reflecting the new purchase price. It is, therefore, misleading to attribute the revenue decline to the new firm. Rather, the revenue loss might be attributed to the community's misfortune in losing the company that had owned and used the building under the higher tax assessment.

Expenditure and Services Effect

The only local government costs associated with the new plants were the expenses of extending water lines and the cost to the community of the new school children. In the case of the electronics firm, there were seven new families and 11 children. The increased cost to the school system was $1,320 a year. For the cooperage plant, there were six new families with a total of 10 school children, for a cost of $1,200 a year. Since no new students resulted from establishment of the garment firm in the area, there was no associated cost to the school district.

Net Fiscal Impact

Calculations of the net fiscal impact on local governments on an annual basis are shown in table 14. The cost associated with the new school children produced a negative impact for both the electronics and the cooperage plant. However, if prior revenue earned from the electronics plant property is ignored, as is discussed in footnote 3 to table 14, the annual deficit to the school district is eliminated.

The only other effect on net expenditure was the costs of the water line extensions, which were treated as net costs in the year each was provided. Had these costs been amortized over the life of the improvements, the annual loss to the city would have been greater than shown.

Russell Springs, Russell County

The last town, Russell Springs, was the smallest one studied. Because of its small population (1,125) and its isolated location in the rugged South Central Knobs area near Lake Cumberland, the effects of a new plant should have been more apparent for this town than for the others.

In 1958, Russell County was the poorest of the five study counties. The county's per capita income of $596 ranked 105th among per capita incomes for Kentucky's 120 counties and was only 41.0 and 28.7 percent, respectively, of the corresponding State and national figures. The rate of insured unemployment was 33.7 percent, but underemployment was an even more serious problem.

The economy was dominated by low-income agriculture; 75 percent of the county land was in farms. Average size of farm and average value of farm products sold per farm were both well below the State averages. There was little manufacturing in the county prior to 1958; the dominant components of income from basic activities were income from agriculture and transfer

payments (table 15). Lake Cumberland State Park provided some basic income in the form of government employment and tourist trade.

Table 15.--Distribution of personal income by source of income, Russell County, Kentucky, 1958

Source of income	Amount	Percentage of total
	1,000 dollars	Percent
Basic activities:		
Commuting to jobs outside county, all industries	2	---
Agriculture	2,640	39.4
Mining	13	0.2
Manufacturing	149	2.2
Services	260	3.9
State government	55	0.8
Nonfarm proprietors' income	188	2.8
Property income	106	1.6
Transfer payments	1,315	19.7
Total	4,728	70.8
Nonbasic activities:		
Contract construction	214	3.2
Transportation, communication, and utilities	77	1.2
Wholesale and retail trade	342	5.1
Finance, insurance, real estate	38	0.6
Services	167	2.5
Other	31	0.5
Nonfarm proprietors' income	393	5.9
Property income	261	3.9
Local governments	426	6.4
Total	1,949	29.2
Grand total	6,677	100.0

Quindry, Kenneth E., and Porter, Robert L., Personal Income in Kentucky Counties, 1958-60, Bureau of Business Research, University of Kentucky, 1962.

In 1959, a manufacturer of men's apparel began operation. This new firm was organized by the former manager of a garment plant in a nearby town. After the first 2 years, during which employment was slightly more than 100, the plant employed approximately 200 persons. The employees were all recruited locally, and 185 of the 206 employees in 1963 lived in Russell County. As in the other garment plants studied, about 90 percent of the employees were women, mostly wives of small farmers.

The new plant was financed by the Russell Springs Industrial Corporation, a private development organization similar to the one described earlier for Stanford, Lincoln County. The property was owned by the development organization and was subject to local real estate taxes (table 16). The manufacturer made rental payments until the failure of the firm in 1966; after that, similar payments were being made by its successor.

Table 16.--Annual property taxes paid to local government units by a clothing manufacturer, Russell Springs, Kentucky, average 1960-63

Local government unit	Property taxes		
	Real	Personal	Total
	Dollars		
County	37.50	---	37.50
School district	75.00	---	75.00
City	37.50	---	37.50
Total	150.00	---	150.00

Revenue Effect

Although the Russell Springs Industrial Development Corporation was subject to real property taxes and the company was subject to personal property taxes, assessment concessions apparently were granted by both the city and the county during the study period. The county assessed the property at

$5,000 (only 5 percent of the estimated market value) and the city did not assess it at all until 1963, when a $5,000 assessment was made. 6/

Expenditure and Services Effect

The new plant had no perceptible effect on local government services since no new children were brought to the community, and the plant site was already serviced by a water line.

Net Fiscal Impact

Since no measurable expenditures occurred because of the plant, the net impact was the same as the revenue effects (table 17). Consequently, Russell Springs experienced a small but positive net fiscal impact as a result of the new plant. In 1966, both the city and county substantially increased the assessment on the plant property; after that date, the total net gain resulting from the firm increased from $42.00 to $1,421.75 annually.

COMPARISONS OF STUDY AND CONTROL GROUPS

The case studies provide reasonable estimates of the direct effect of the new industry on local expenditures and revenue. However, local government finances may also be influenced indirectly by a new plant. Workers in the service industries and other "nonbasic" sectors may move to the area, bringing with them additional children for the local schools and increasing demand for other government services. The increased income of local residents might also produce demands for better quality local government services. In addition, new industry might have an indirect effect on the revenues available. People moving to town may improve property presently on the tax rolls, increasing the assessed value of expansions, which would increase the value of the property on the tax rolls and increase tax revenue for local government.

The case studies provide little information about these indirect or secondary effects of the new firm. To obtain an indication of these effects, the study counties were compared with a group of "control" counties. In this way, changes in local government finances that would have occurred normally could be separated from those due to new industry.

Table 18 provides a comparison of revenue and expenditure trends between 1957 and 1962 for all units of local government in the study and control

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6/ In 1966, the city assessment increased to $50,000, coinciding with an increase in the city assessment ratio from 33-1/3 to 100 percent. The county assessment increased to $300,000 in 1967, reflecting the new assessment ratio and an expansion of the plant. Neither the city nor the county assessed the personal property of the plant during the study period. Consequently, during the study period the new revenue produced was quite small. However, following the reassessment the new revenue became quite substantial, especially for the county and the school district.

Table 17.--Annual net fiscal impact on local government units caused by addition of a clothing manufacturer, Russell Springs, Kentucky, average 1960-63

Item	County	School district	City	Total
	- - - - - - - Dollars - - - - - - -			
Additional revenue 1/ 2/	18.25	22.50	1.25	42.00
Additional cost of services	0	0	0	0
Net fiscal impact	18.25	22.50	1.25	42.00

1/ Average annual revenue after plant was built; less annual revenue before plant was built.

2/ Property reassessed in 1966; additional revenue increased from $42.00 to $1,421.75.

groups. There is little difference in the size of revenue increases between the two groups; in fact, the variation within either group (not shown in the table) was considerably greater than that between the groups.

Although expenditures increased more rapidly in the study counties, within-group variation was still very large. The largest increase in total expenditures during 1957-62 occurred in Laurel County, where the new plant did not begin operation until late 1962. Certainly the public sector employment data, which show a larger rise for the control group than for the study group, do not suggest the existence of a secondary impact on the level of government services.

Analysis of school districts shows somewhat more difference between study counties and control counties (table 19). Of the seven major school districts in the study group, four had increases in the number of students enrolled and in the number of teachers on their staffs. On the other hand, all of the control districts experienced enrollment declines, and three reduced their teaching staffs. These findings must be interpreted with considerable caution, however. In the case of Stanford, for example, the enrollment increase in the city district was more than offset by a large decline in the county district. In Fleming and Laurel Counties, offsetting decreases were not present.

Secondary impacts on county governments, if such impacts existed, did not show up in the available data. Variation in taxes and expenditures within each of the two groups was large, and there were no significant differences between groups.

Table 18.--Annual local government revenue, expenditures, and employment, study and control counties, Kentucky, 1957 and 1962

Item	Unit	1957	1962	Percentage increase
				Percent
Study counties:				
General revenue 1/	1,000 dol.	4,627	7,265	57.0
Per capita	Dol.	56	91	61.2
Direct general expenditures ($1,000)	1,000 dol.	4,214	7,496	77.9
Per capita	Dol.	51	93	82.6
Local government employment 2/	Thou.	1,234	1,265	2.5
Control counties:				
General revenue 1/ ($1,000)	1,000 dol.	3,511	5,443	55.0
Per capita	Dol.	55	91	64.6
Direct general expenditures ($1,000)	1,000 dol.	3,372	5,327	58.0
Per capita	Dol.	53	86	62.2
Local government employment 2/	Thou.	879	1,020	16.0

1/ Excludes interlocal revenues.
2/ Full-time.

U.S. Bureau of the Census, Census of Governments: Government in Kentucky, VI, 1957, table 36; and VII, 1962, tables 27 and 28.

The study towns were analyzed individually in an attempt to determine possible secondary effects of the new industry on municipal governments. Only in Lebanon did there appear to be an increase in municipal expenditures that might have been caused by economic growth.

In summary, the use of the control technique revealed no evidence of secondary influence of new industry on either revenue or expenditure. This finding was in accord with the observation of local residents that no increase in government services had resulted from the location of industry.

Table 19.--School enrollment and number of teachers in study and control counties, 1958/59 and 1963/64

County and town school districts	Enrollment, beginning of school year			Number of teachers, beginning of school year		
	1958/59	1963/64	Increase or (decrease)	1958/59	1963/64	Increase or (decrease)
Study:						
Fleming	2,346	2,462	116	86	92	6
Laurel 1/	6,643	6,844	201	238	260	22
London (town) 1/	1,027	1,134	107	37	43	6
Lincoln 1/	4,245	4,028	(217)	163	161	(2)
Stanford (town) 2/	677	812	135	31	32	1
Marion	3,434	3,081	(353)	131	116	(15)
Russell	2,773	2,667	(106)	114	102	(12)
Total	19,441	19,082	(359)	832	731	(1)
Control:						
Bath	2,031	2,020	(11)	82	82	---
Clay	5,780	5,556	(224)	200	212	12
Estill 1/	2,880	2,803	(77)	110	105	(5)
Irvine (town) 2/	659	597	(62)	24	24	---
Lee	1,966	1,951	(15)	74	72	(2)
Rockcastle	3,257	3,173	(84)	140	132	(8)
Total	15,914	15,503	(411)	606	603	(3)

1/ Total of all school districts in the county.
2/ Included in county total.

Kentucky Department of Education, XXVII, pp. 1174-1183 and XXXIII, pp. 338-353, Frankfort.

A CONCLUDING NOTE

Two major conclusions emerge from this study. First, new manufacturing plants not infrequently cost rural communities more than they return in tax revenues. Second, the fiscal impact on a new plant is not necessarily uniform among the various units of government affected. The total costs and benefits and their distribution, subjects not discussed in this paper, are the proper basis on which to decide whether new industry is desirable. Nevertheless, in the light of these findings, it would seem to be a good idea for each unit of government that will be affected to consider, and plan for, the effects on its budget if new industry comes. Planning will be even more desirable if tax concessions are granted the new plant, or if all but a very small number of the employees of the new plant are not people who already live in the area.

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